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CLAIMS

What is claimed is:

1. A communication system, comprising:

a mobile station having a transmitter operating on one of a plurality of frequency channels in a first RF frequency band;

an associated local area communication subsystem operating by frequency hopping amongst a plurality of channels in a second RF frequency band; and

a controller for altering a frequency hopping pattern of said local area communication subsystem as a function of a currently specified frequency channel in the first frequency band.

2. A communication system as in claim 1, wherein the frequency hopping pattern is altered if the currently specified frequency channel is one having a known frequency or frequency component that lies in the second frequency band.

3. A communication system as in claim 1, wherein the first frequency band is in the range of about 800MHz to about 900MHz, and wherein the second frequency band is in the range of about 2400MHz to about 2500MHz.

4. A communication system as in claim 1, wherein the first frequency band is in the range of about 824MHz to about 891MHz, and wherein frequency hops occur at $2402+k$ MHz, where $k=0,1,...,78$.

5. A communication system as in claim 1, wherein the frequency hopping pattern is altered by excluding at least one of said plurality of channels.

6. A communication system as in claim 1, wherein the frequency hopping pattern is altered by selecting another channel if an excluded at least one of said plurality of channels is selected to be hopped to.

7. A communication system, comprising:

a mobile station having a transmitter operating on one of a plurality of frequency channels in a first RF frequency band;

an associated local area communication subsystem operating by frequency hopping amongst a plurality of channels in a second RF frequency band; and

a controller for altering a frequency hopping pattern of said local area communication subsystem as a function of a currently specified frequency channel in the first frequency band, and as a function of a bandwidth of the currently specified frequency channel.

8. A communication system as in claim 7, wherein the frequency hopping pattern is altered if the currently specified frequency channel is one having a harmonic frequency that lies in the second frequency band.

9. A communication system as in claim 7, wherein the first frequency band is in the range of about 800MHz to about 900MHz, wherein the second frequency band is in the range of about 2400MHz to about 2500MHz, and wherein the bandwidth is in the range of about 30kHz to about 5MHz.

10. A communication system as in claim 7, wherein the first frequency band is in the range of about 824MHz to about 891MHz, wherein frequency hops occur at $2402+k$ MHz, where $k=0,1,\dots,78$, and wherein the bandwidth is in the range of about 30kHz to about 5MHz.

11. A communication system as in claim 7, wherein the frequency hopping pattern is altered by excluding at least one of said plurality of channels if the bandwidth is about 30kHz, and excluding more than one of said plurality of channels if the bandwidth is about 5MHz.

12. A communication system as in claim 7, wherein the frequency hopping pattern is altered by selecting another channel if an excluded at least one of said plurality of

channels is selected to be hopped to.

13. A method for operating a communication system, comprising:

preparing to operate a mobile station transmitter on one of a plurality of frequency channels in a first RF frequency band;

determining if a harmonic of the frequency channel to be operated has the potential to interfere with communications within an associated local area communication subsystem that operates by frequency hopping amongst a plurality of channels in a second RF frequency band; and

if so, altering a frequency hopping pattern of the local area communication subsystem so as to avoid the interference.

14. A method as in claim 13, wherein the step of determining also considers a bandwidth of the frequency channel to be operated on.

15. A method as in claim 13, wherein the frequency hopping pattern is altered if the frequency channel to be operated on is one having a harmonic frequency that lies in the second frequency band.

16. A method as in claim 13, wherein the first frequency band is in the range of about 800MHz to about 900MHz, and wherein the second frequency band is in the range of about 2400MHz to about 2500MHz.

17. A method as in claim 13, wherein the first frequency band is in the range of about 824MHz to about 891MHz, and wherein frequency hops occur at $2402+k$ MHz, where $k=0,1,...,78$.

18. A method as in claim 13, wherein the frequency hopping pattern is altered by excluding at least one of said plurality of channels.

19. A method as in claim 13, wherein the frequency hopping pattern is altered by

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